

Cold-Caused & Cold-Related Deaths in Arizona by Year, 2011-2020

Deaths from Exposure to Excessive Natural Cold		
Year	Cold–Caused [†] Deaths	Cold–Related Deaths
2011	25	53 Of those, 47% were cold-caused [†]
2012	18	36 Of those, 50% were cold-caused [†]
2013	31	64 Of those, 48% were cold-caused [†]
2014	20	36 Of those, 56% were cold-caused [†]
2015	23	40 Of those, 58% were cold-caused [†]
2016	25	57 Of those, 44% were cold-caused [†]
2017	26	49 Of those, 53% were cold-caused [†]
2018	16	46 Of those, 35% were cold-caused [†]
2019	39	62 Of those, 63% were cold-caused [†]
2020	30	61 Of those, 49% were cold-caused [†]

[†] **Cold-caused** deaths are deaths where the primary cause of death is listed as exposure to excessive cold of natural origin or hypothermia as primary cause of death. **Cold-related** deaths are deaths where exposure to excessive cold of natural origin or hypothermia is listed anywhere on the death record and include those that were cold-caused.



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Cold-Related Deaths Summary 2011-2020

		Total	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Age Group (years)	Infants <1	0	0	0	0	0	0	0	0	0	0	0
	Children 1 - 14	0†	0	0	0	0	*	0	*	0	*	0
	Adolescents 15 - 19	10†	*	*	*	0	0	0	*	0	*	0
	Young Adults 20 - 44	122	19	8	11	12	7	12	9	11	14	19
	Middle-Aged Adults 45 - 64	223	15	20	37	16	16	28	18	21	26	26
	Elderly 65+	146	16	7	14	8	16	17	20	14	18	16
	Missing Age	0†	*	0	0	0	0	0	0	0	0	0
Gender	Female	110†	13	*	13	7	7	13	13	13	17	13
	Male	391	40	32	51	29	33	44	36	33	45	48

Notes: † Sum rounded to nearest tens unit due to non-zero addend less than 6; * Number of deaths related to exposure to excessive cold of natural origin were suppressed due to non-zero count less than 6.



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		Total	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
State or Country of Residence	Arizona Resident	463	49	29	57	35	36	53	46	42	58	58
	Non-Arizona Resident	40†	*	7	7	*	*	*	*	*	*	*
Geographic Region of Occurrence	Central Counties	132	16	7	11	10	8	12	16	11	24	17
	Northern Counties	268	23	20	40	22	24	32	21	24	29	33
	Southern Counties	60†	8	*	12	*	*	8	*	8	*	6
	Western Counties	0†	0	0	0	0	0	0	*	0	0	0
	Unknown	40†	6	6	*	0	*	*	6	*	*	*
Race/Ethnicity	American Indian/ Alaskan Native	276	27	22	36	21	25	30	27	23	30	35
	Asian or Pacific Islander	0†	0	0	0	0	*	0	0	*	0	*
	African American/Black	10†	*	*	0	0	*	*	*	0	*	*
	Hispanic/Latino	40†	*	*	*	*	*	*	*	6	*	*
	White Non-Hispanic	166	20	11	23	14	10	21	11	14	26	16

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Classification of geographic regions: Central = Gila, Graham, Maricopa, Pinal, and Yavapai; Eastern = Greenlee; Northern = Apache, Coconino, Mohave, and Navajo; Southern = Cochise, Pima, Santa Cruz, and Yuma; Western = La Paz.



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		Total	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
County of Occurrence	Apache	90†	9	9	7	7	13	9	*	11	10	8
	Cochise	10†	*	0	*	*	*	0	0	0	0	0
	Coconino	90†	8	*	11	8	*	17	*	9	9	13
	Gila	10†	*	0	0	*	*	0	*	0	*	8
	Graham	0	0	0	0	0	0	0	0	0	0	0
	Greenlee	0	0	0	0	0	0	0	0	0	0	0
	La Paz	0†	0	0	0	0	0	0	*	0	0	*
	Maricopa	70†	7	*	6	*	*	*	11	6	10	12
	Mohave	10†	*	*	*	0	*	*	*	*	0	*
	Navajo	80†	*	7	18	6	*	*	11	*	10	9
	Pima	50†	7	*	9	*	*	7	*	7	*	*
	Pinal	10†	*	0	*	0	*	*	0	*	*	*
	Santa Cruz	0†	0	0	*	0	0	0	0	0	0	0
	Yavapai	30†	*	*	*	*	*	*	*	*	*	0
	Yuma	10†	0	0	*	0	0	*	*	*	0	*
	Unknown	60†	8	6	*	*	*	7	7	*	10	8

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Substance Use	Drug Use	30†	0	*	*	*	*	*	0	11	*	9
	Alcohol Use	223	23	20	34	13	15	24	23	18	22	31
	Drug & Alcohol Use Combined	20†	*	0	*	*	*	*	0	*	*	*
	No Substance Use	232	29	15	25	19	22	30	26	14	36	16

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		Total
Month of Occurrence	January	127
	February	72
	March	46
	April	18
	May	7
	June	*
	July	7
	August	8
	September	7
	October	23
	November	61
	December	125

Notes: † Sum rounded to nearest tens unit due to non-zero addend less than 6



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Methods

ICD-10 Codes	Description
X31	Exposure to excessive cold of natural origin
T68	Hypothermia
T69	Other effects of reduced temperature
T33	Superficial frostbite
T34	Frostbite with tissue necrosis
W93	Exposure to excessive cold of man-made origin

- Criteria adapted from Council of State & Territorial Epidemiologists (CSTE)
- Methods search entire death record for ICD-10 codes
- ICD-10 code W93 related to man-made sources of cold were excluded
- Substance use codes (ICD-10) for alcohol-and drug-related deaths are defined by [ADHS Population Health and Vital Statistics Diagnostics Categories](#)



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